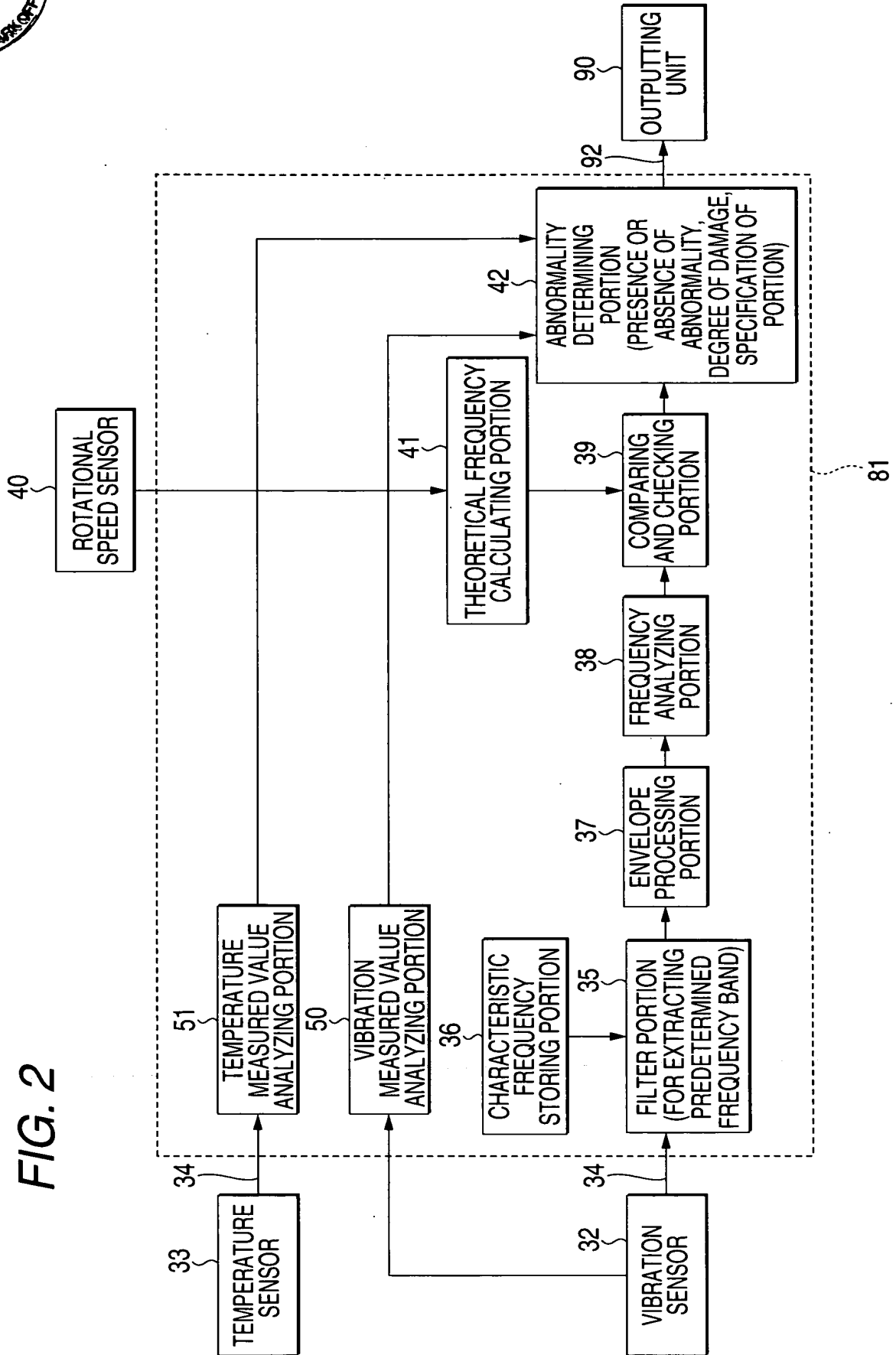


FIG. 1



FIG. 2





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FIG. 3

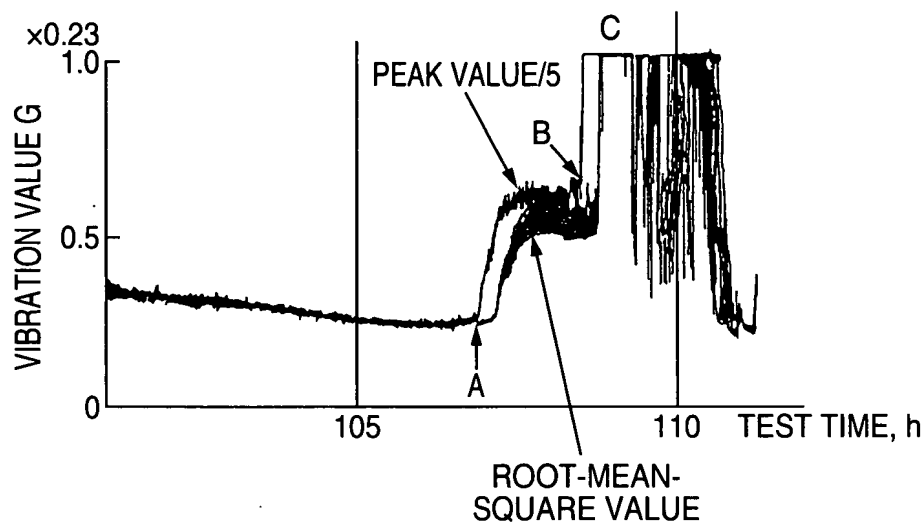


FIG. 4

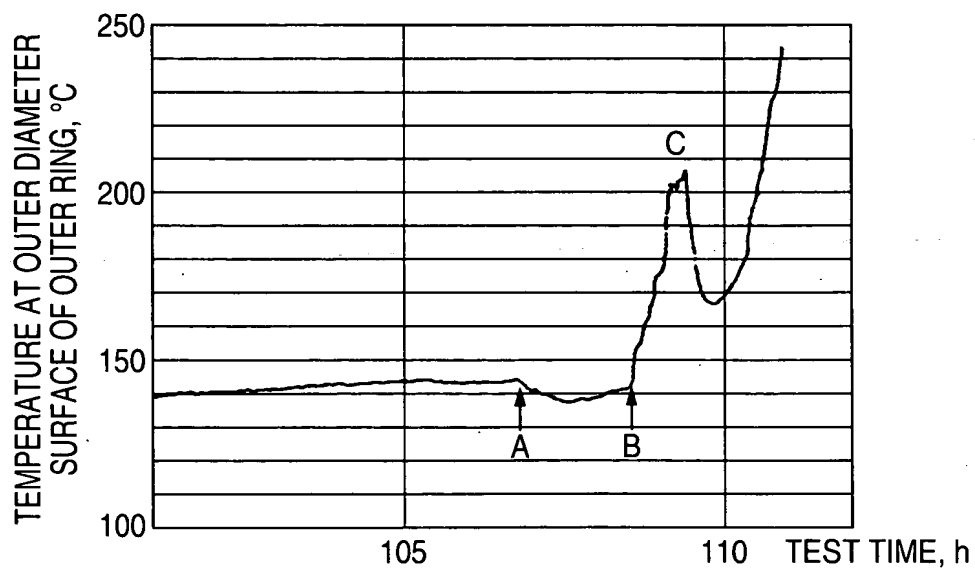




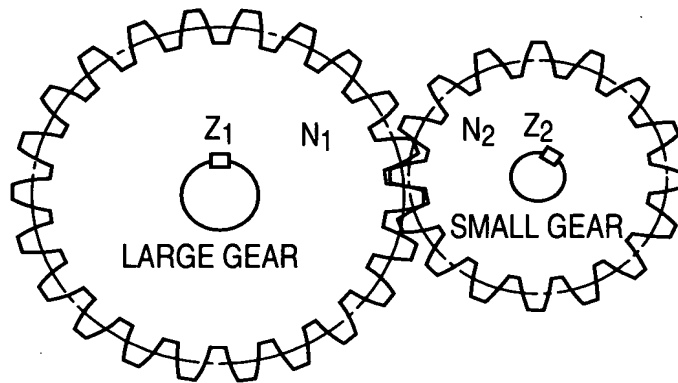
FIG. 5

PORTION OF BEARING (S _x)	FREQUENCY CORRESPONDING TO THE PORTION
INNER RING (S _i)	$Z_{fi} = \frac{f_r}{2} \left(1 + \frac{D_a}{d_m} \cdot \cos \alpha \right) Z$
OUTER RING (S _o)	$Z_{fc} = \frac{f_r}{2} \left(1 - \frac{D_a}{d_m} \cdot \cos \alpha \right) Z$
ROLLING ELEMENT (S _b)	$2f_b = f_r \left(1 - \frac{D_a^2}{d_m^2} \cdot \cos^2 \alpha \right) \frac{d_m}{D_a}$
RETAINER (S _c)	$f_c = \frac{f_r}{2} \left(1 - \frac{D_a \cdot \cos \alpha}{d_m} \right)$

f_r : INNER (OUTER) RING ROTATIONAL SPEED [Hz]
 f_c : RETAINER ROTATIONAL SPEED [Hz]
 f_b : ROLLING MEMBER ROTATING SPEED [Hz]
 d_m : ROLLING ELEMENT PITCH CIRCLE DIAMETER [mm]
 Z : NUMBER OF ROLLING ELEMENT
 f_i : $f_r - f_c$
 D_a : ROLLING MEMBER DIAMETER [mm]
 α : CONTACT ANGLE [rad]



FIG. 6



MESH FREQUENCY COMPONENT : $S_g = Z_1 \times \frac{N_1}{60}$ or $S_g = Z_2 \times \frac{N_2}{60}$

N₁: ROTATIONAL SPEED OF LARGE GEAR (min⁻¹)

N₂: ROTATIONAL SPEED OF SMALL GEAR (min⁻¹)

Z₁: TEETH NUMBER OF LARGE GEAR

Z₂: TEETH NUMBER OF SMALL GEAR

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FIG. 7

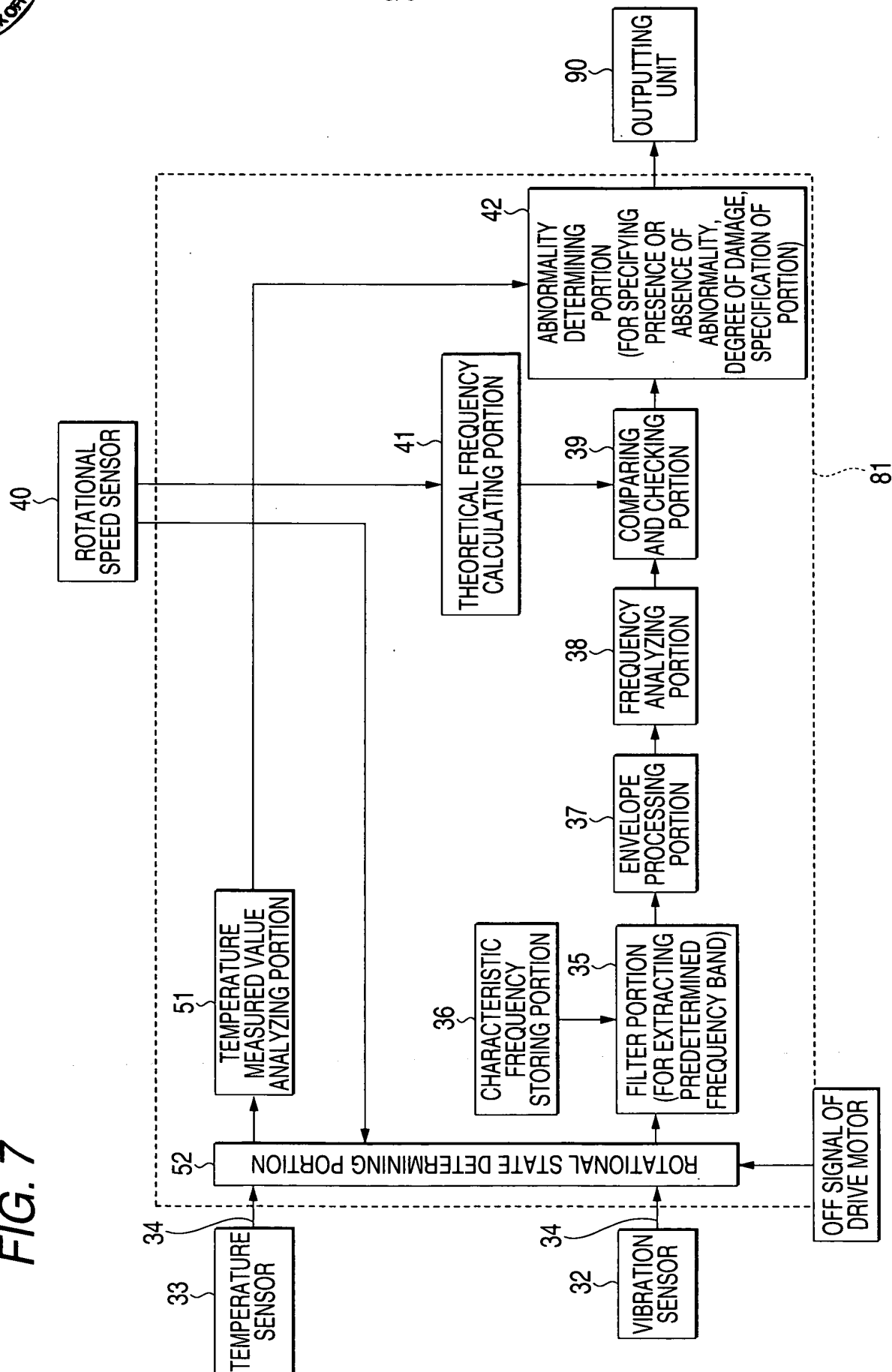




FIG. 8

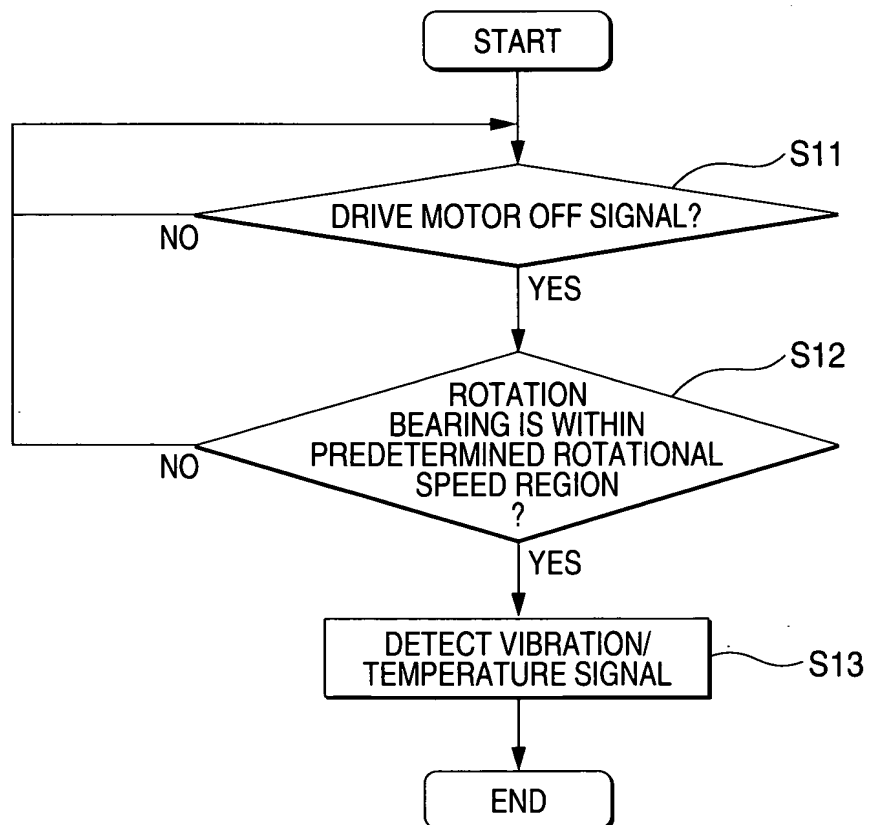


FIG. 9

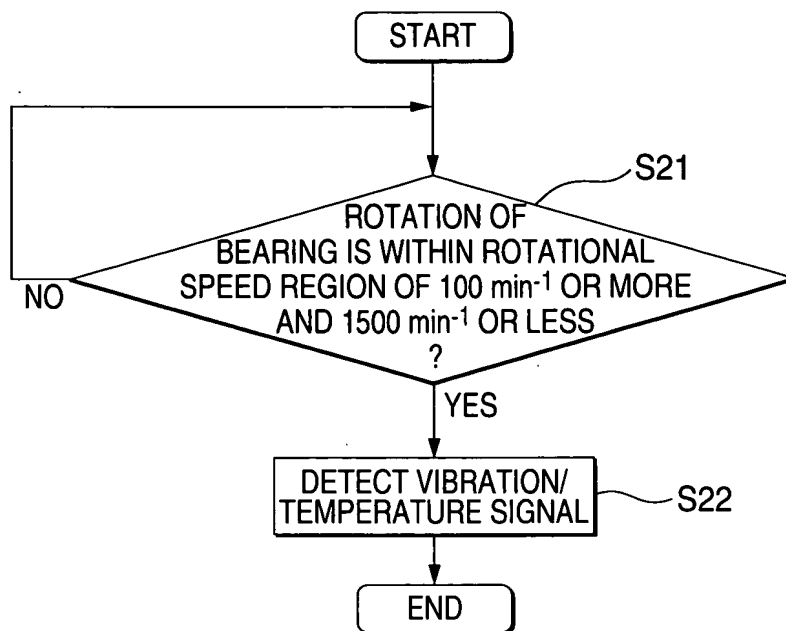
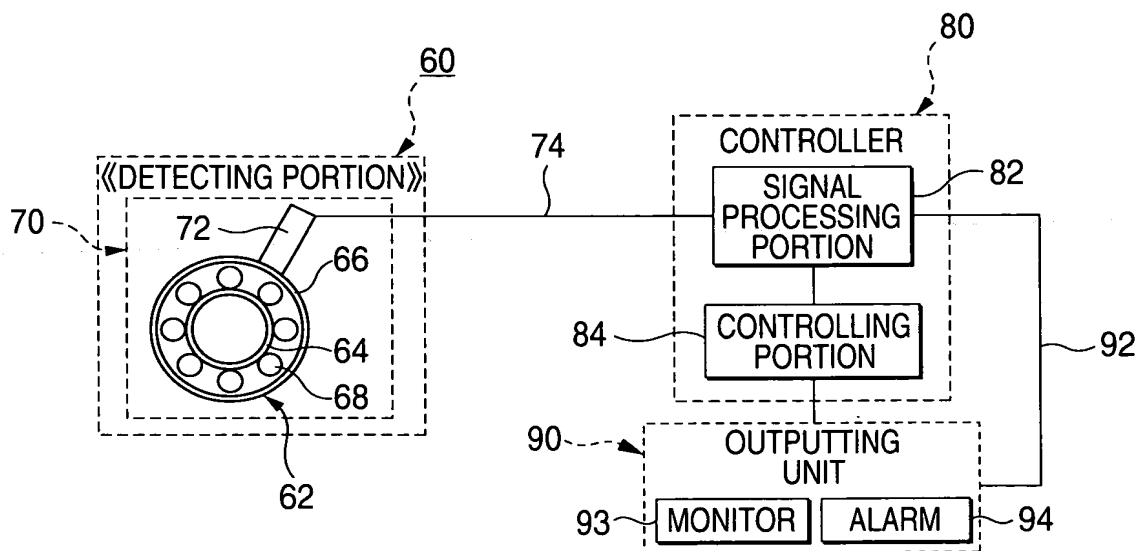


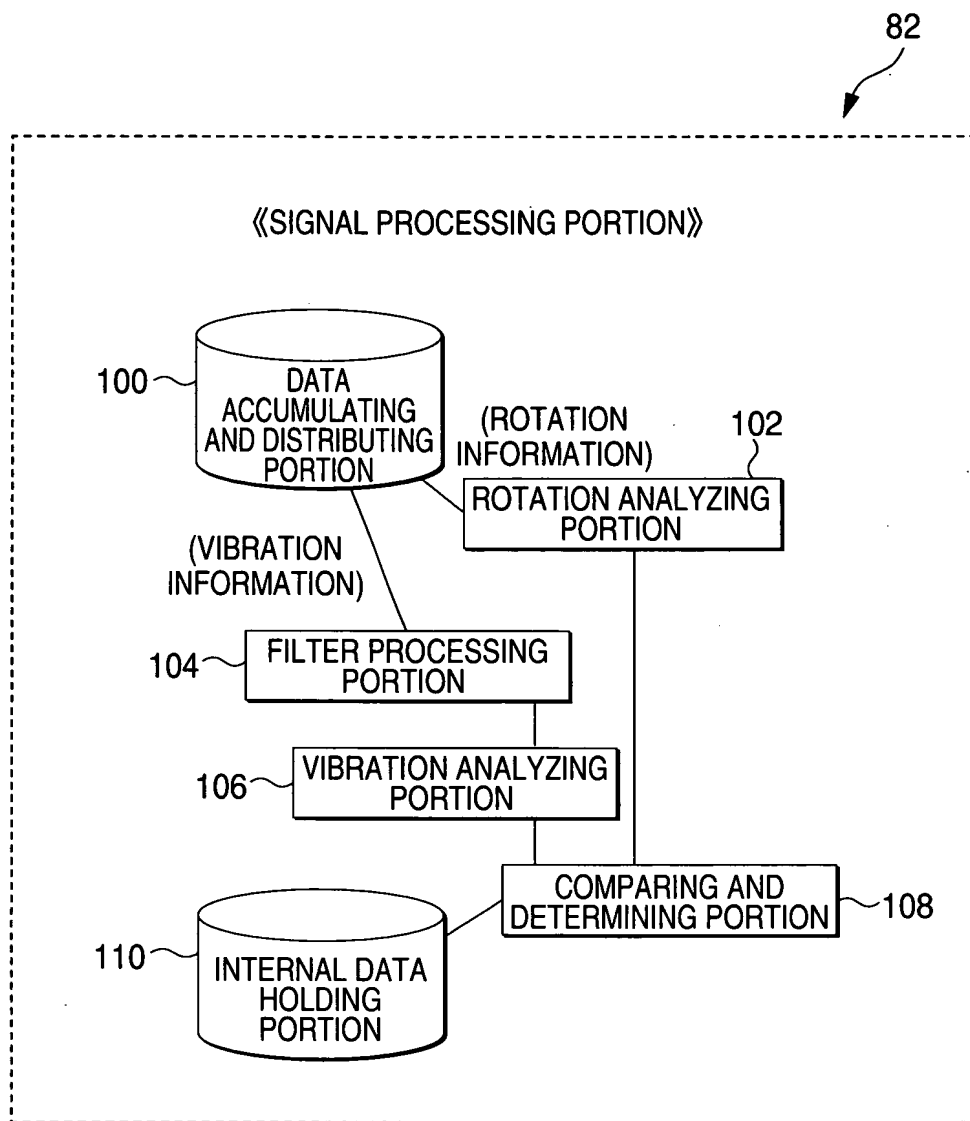
FIG. 10

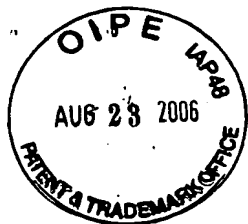




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FIG. 11





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FIG. 12

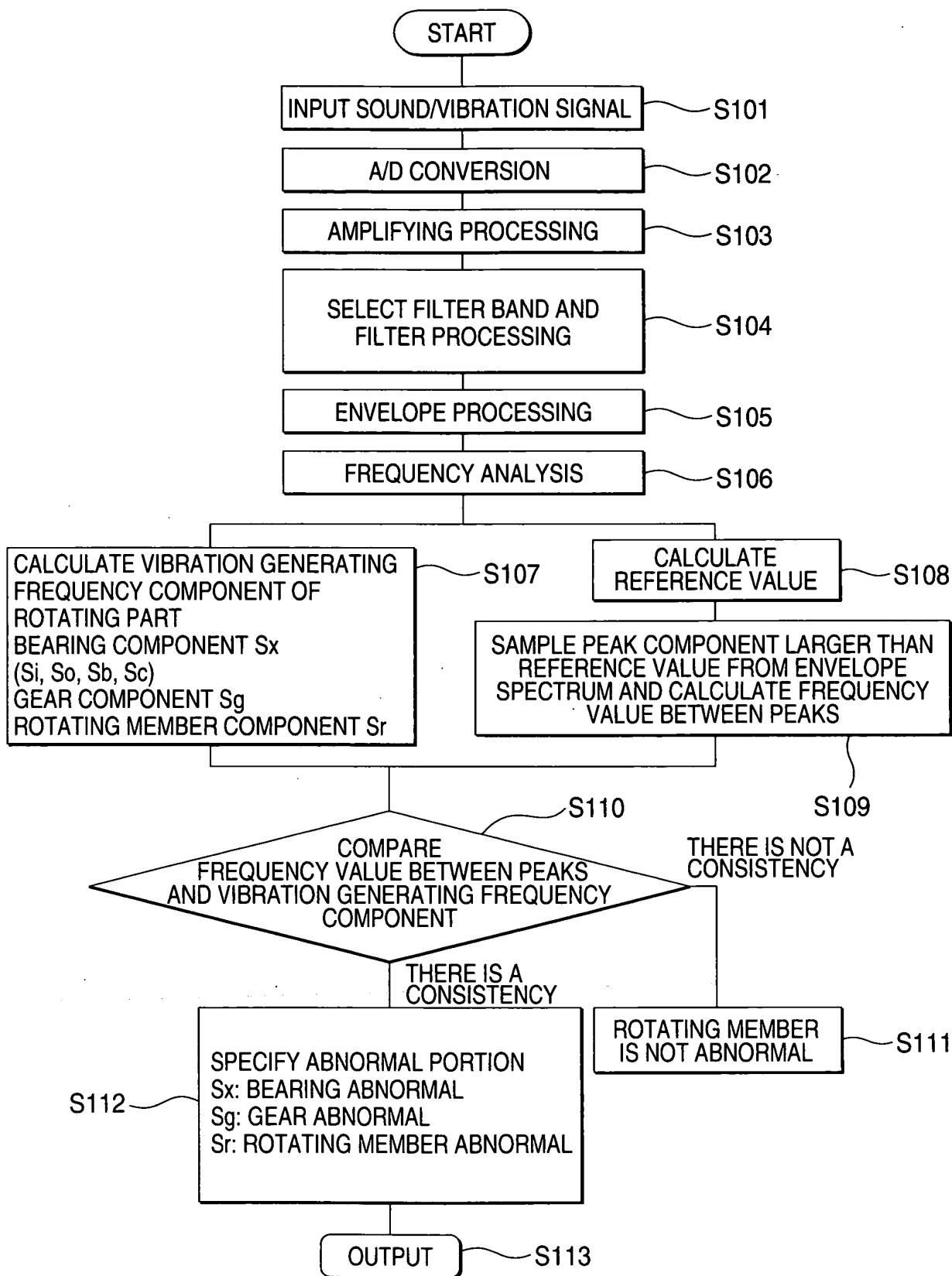
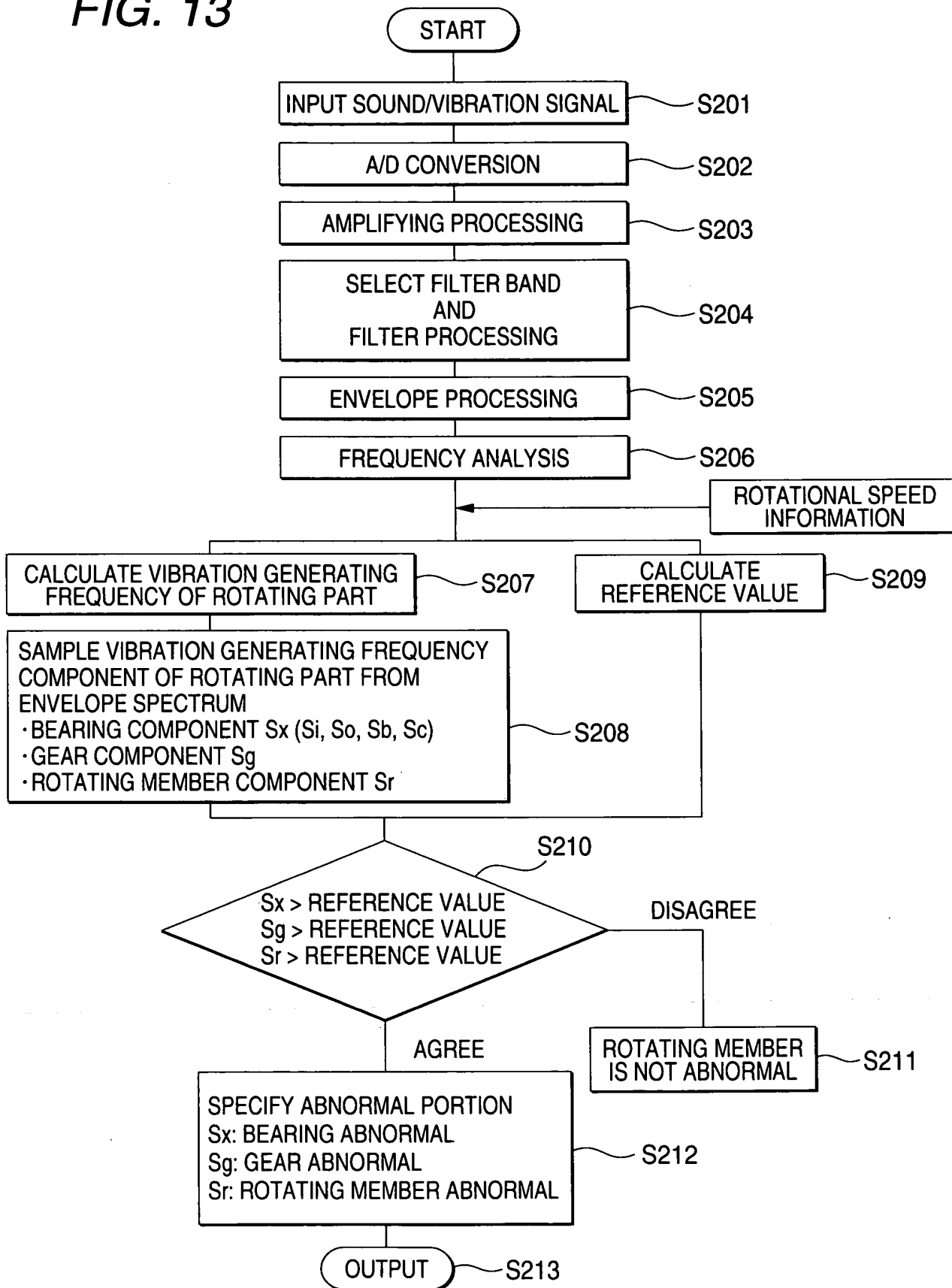


FIG. 13





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FIG. 14

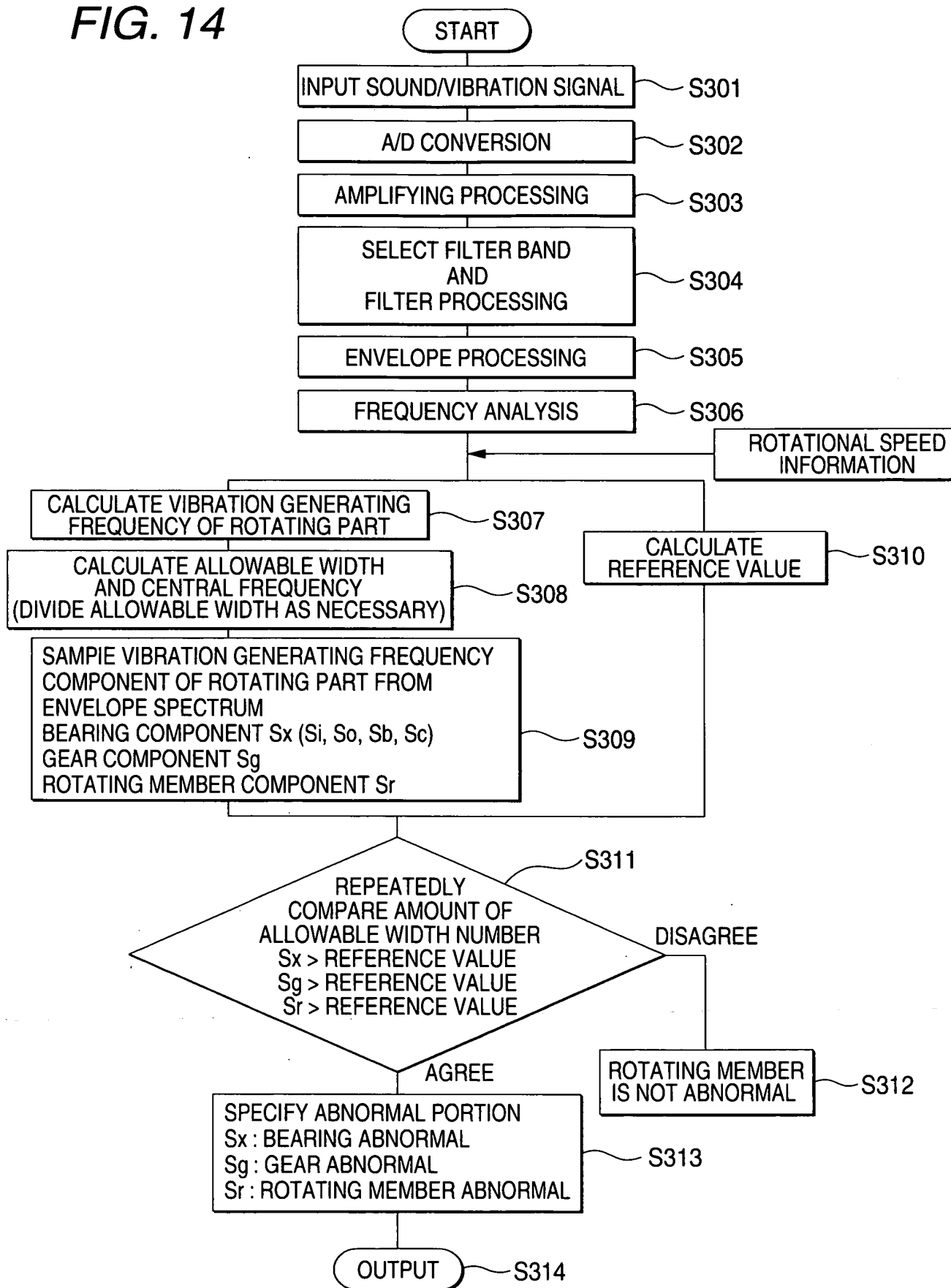
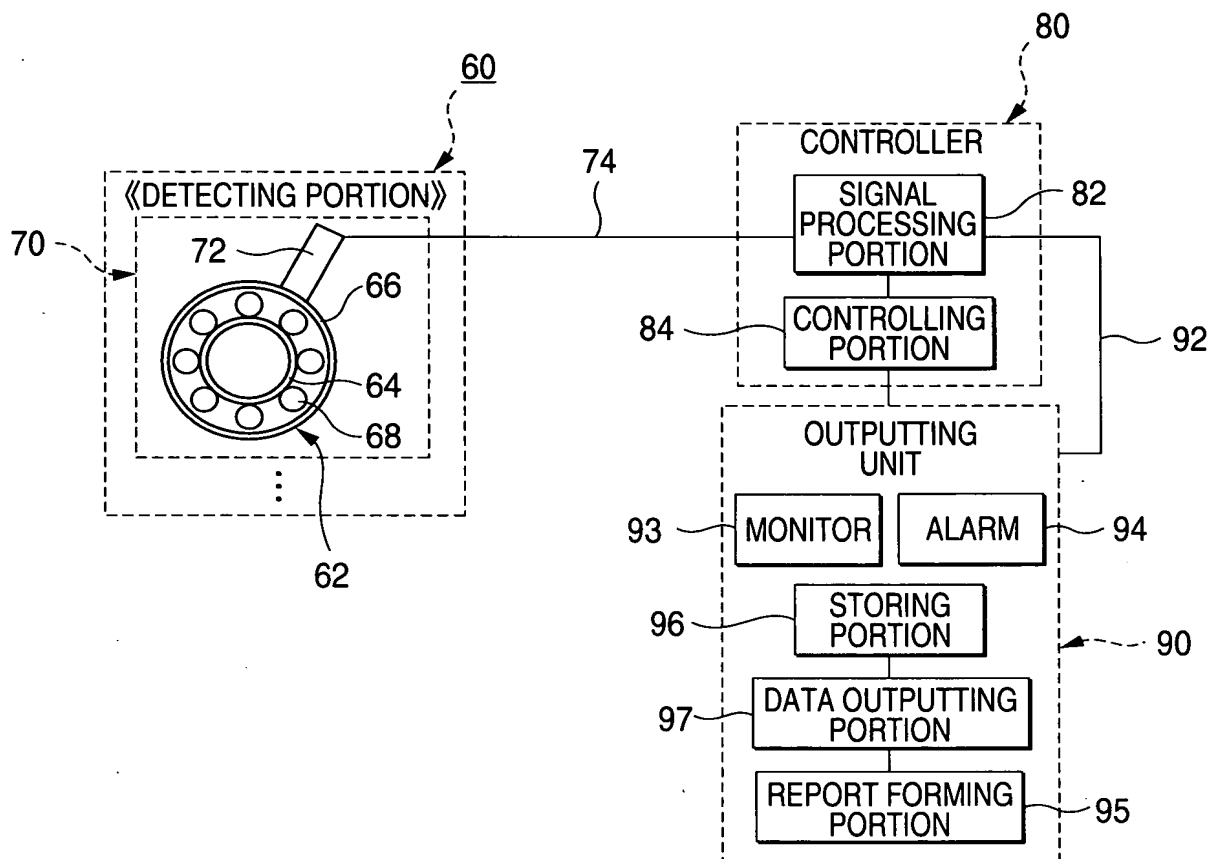


FIG. 15



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FIG. 16

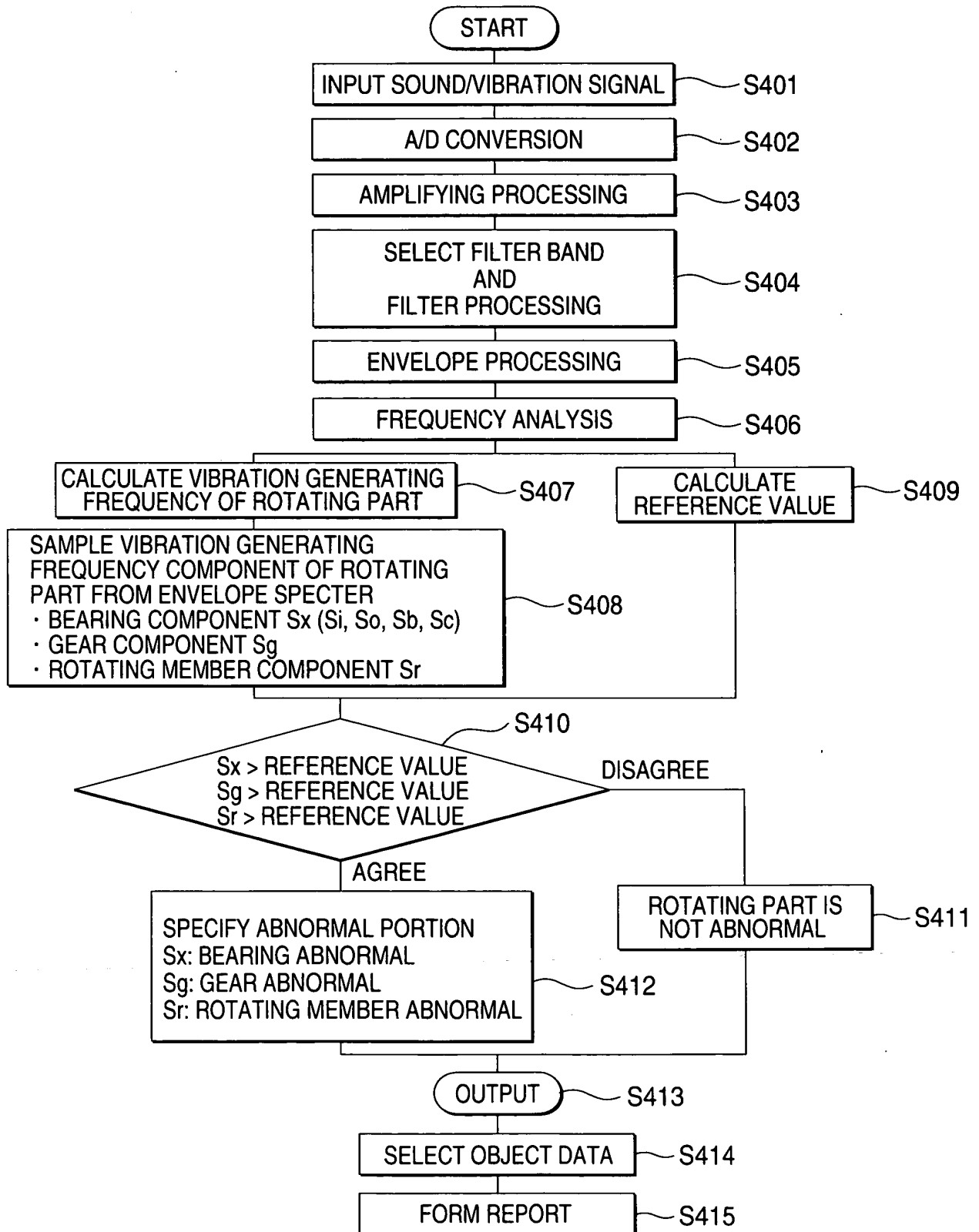


FIG. 17

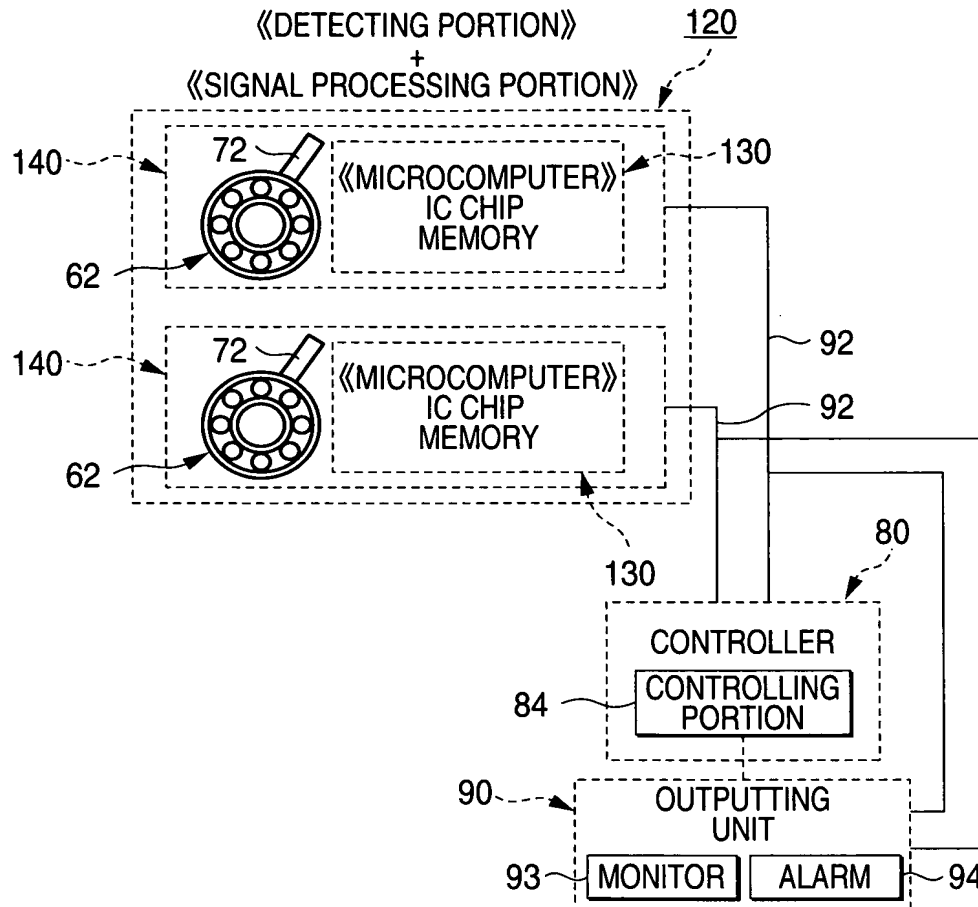


FIG. 18

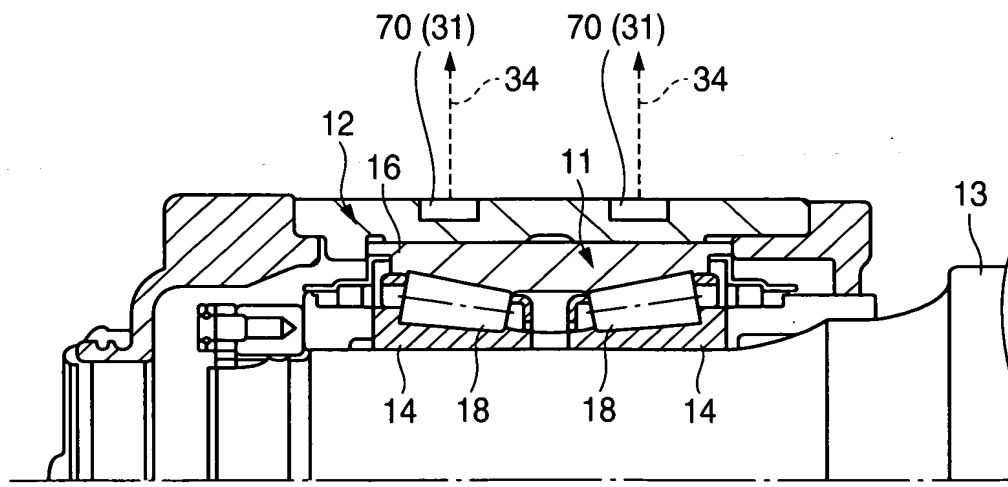
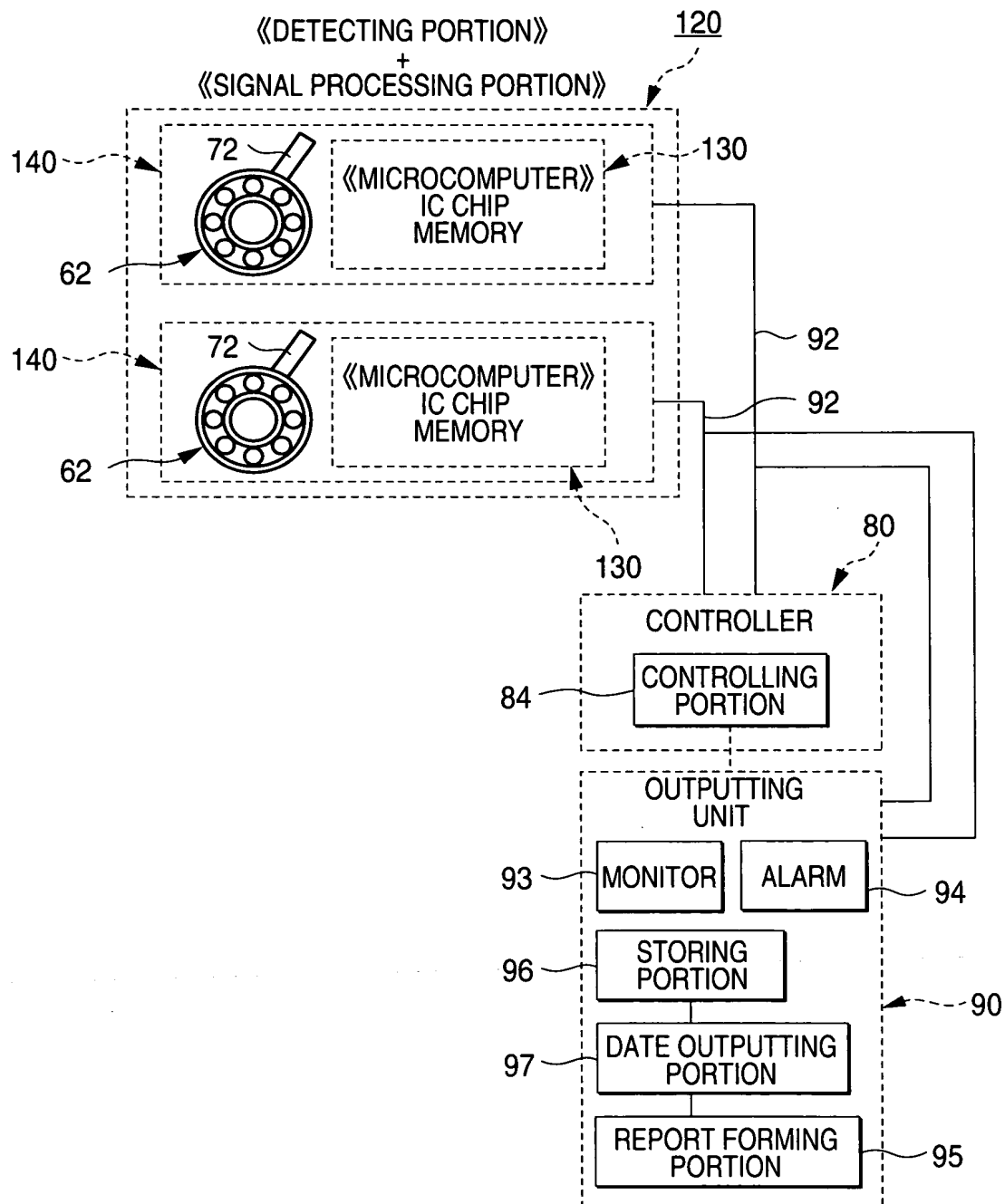


FIG. 19



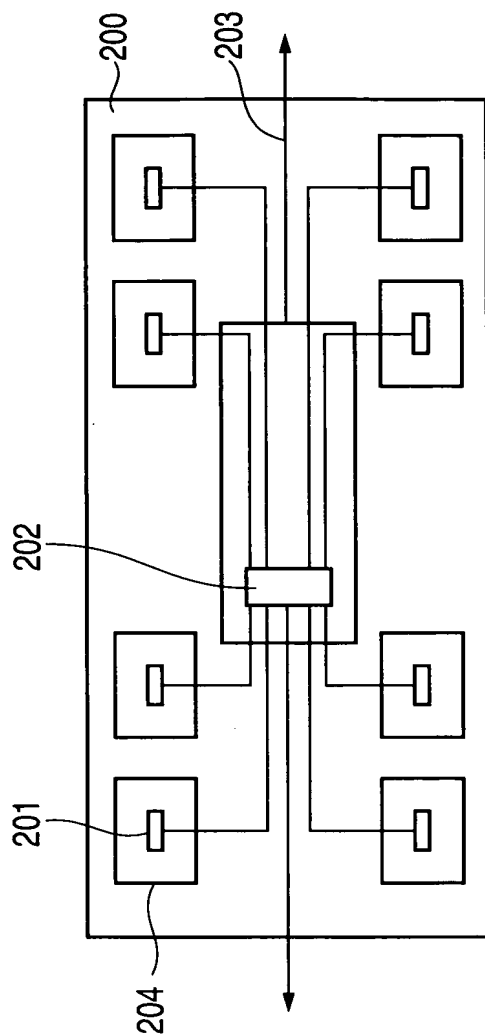


FIG. 20 (a)

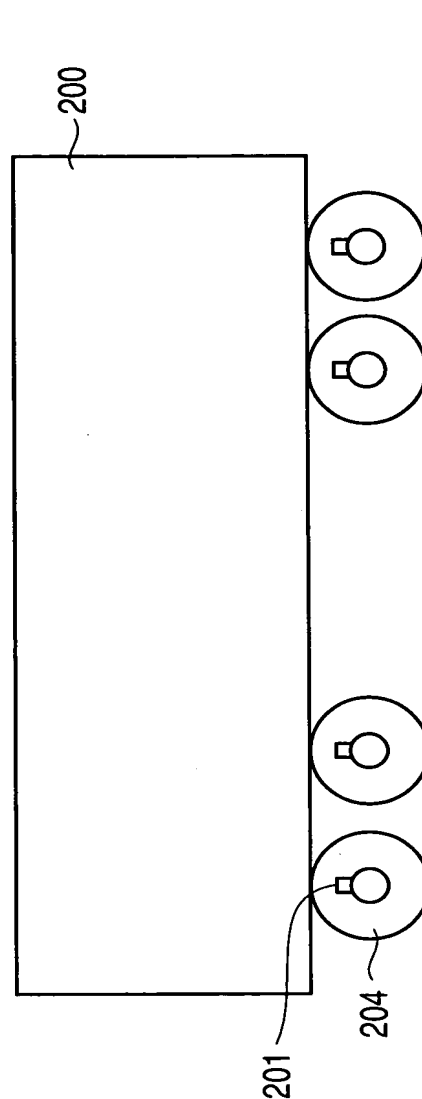


FIG. 20 (b)

FIG. 21

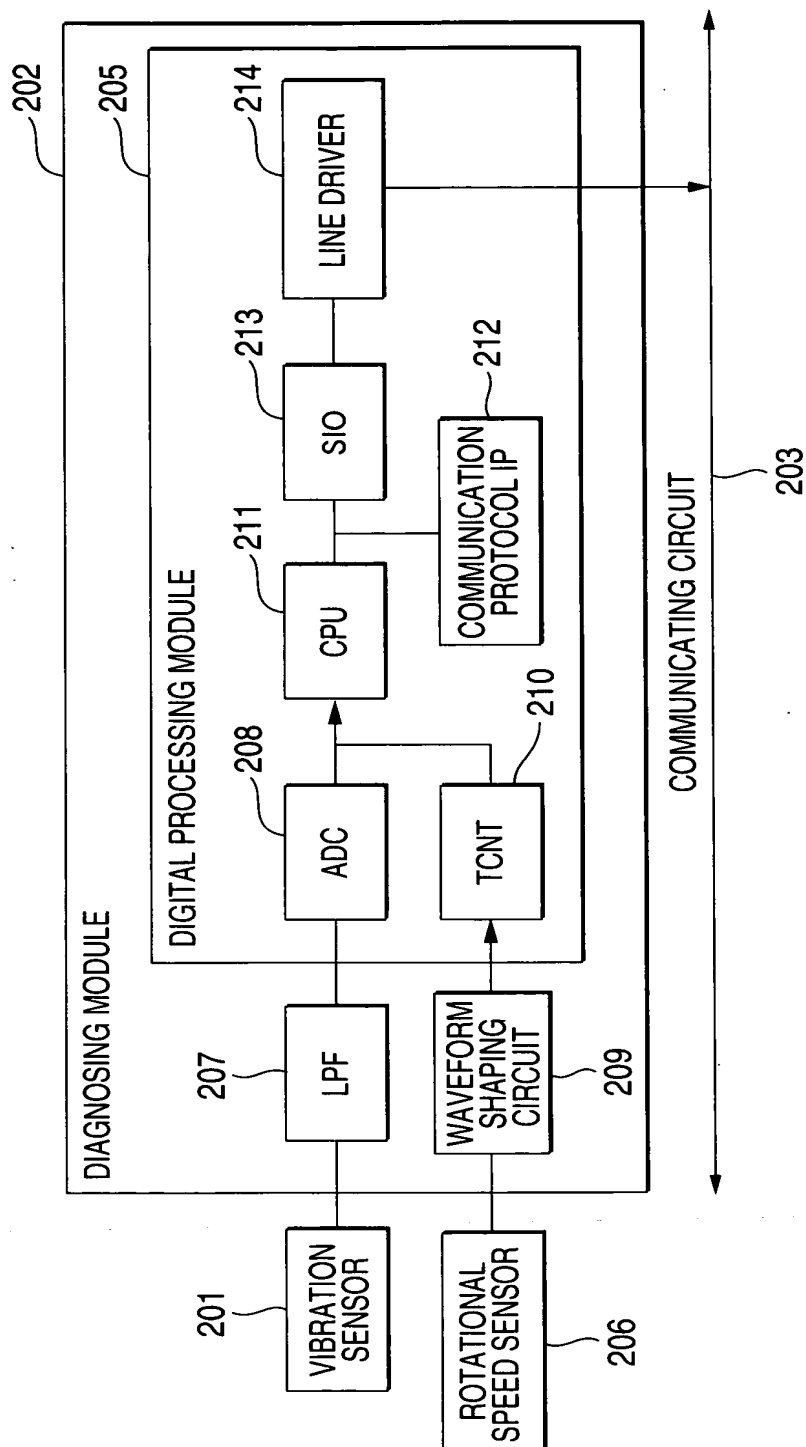
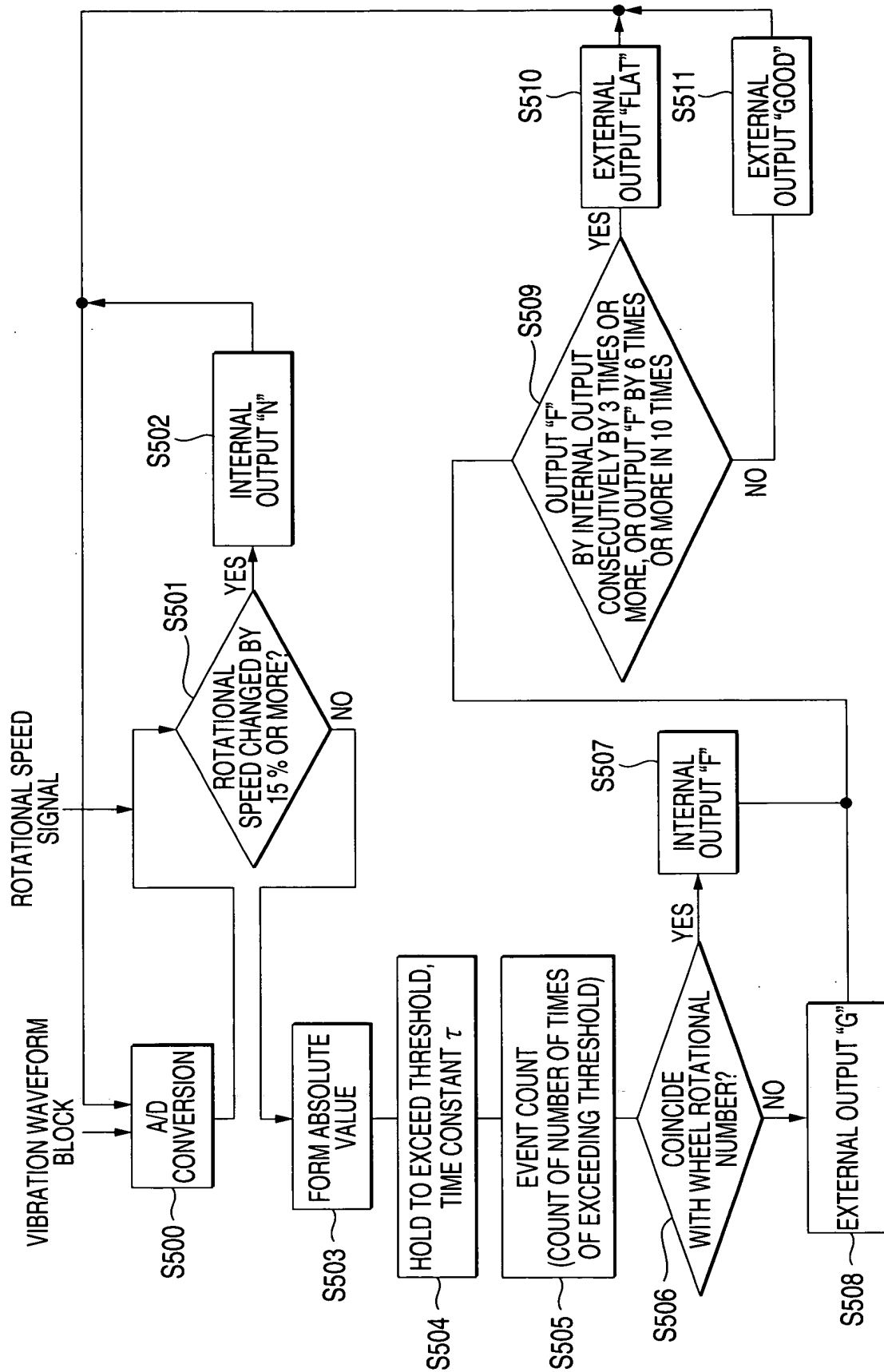


FIG. 22





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FIG. 23A

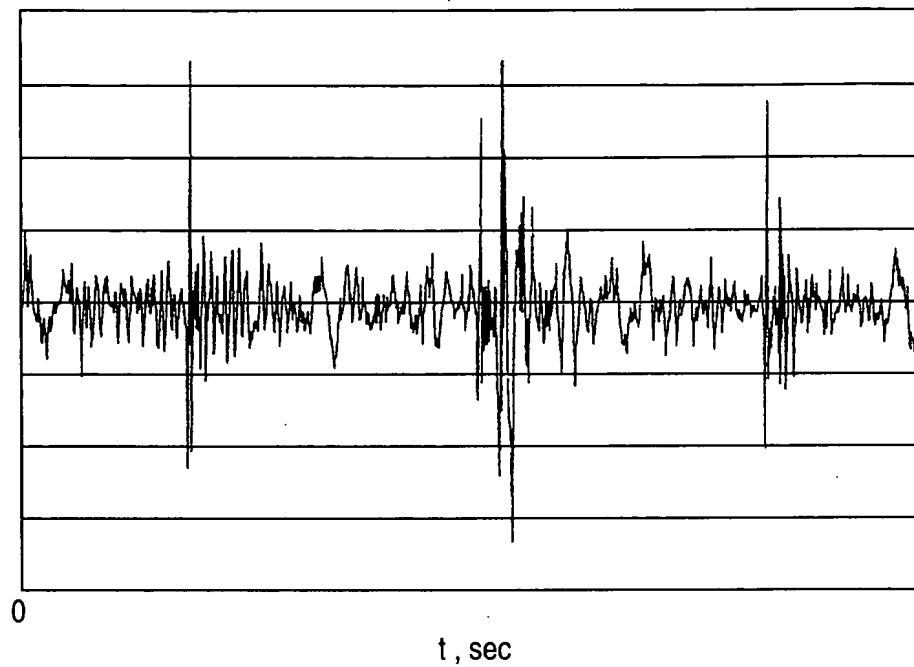


FIG. 23B

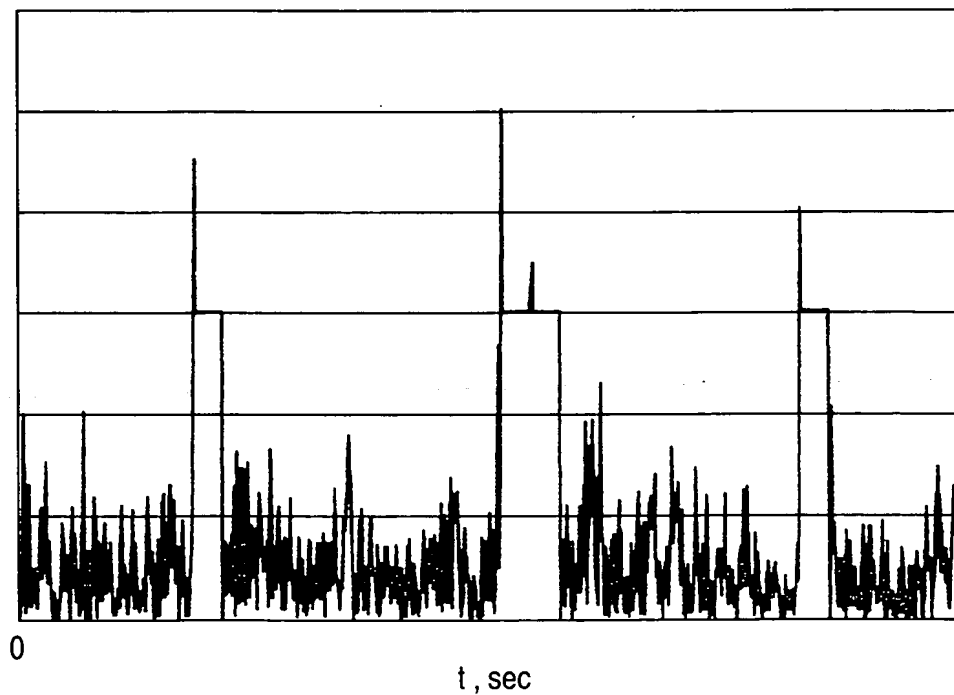




FIG. 24

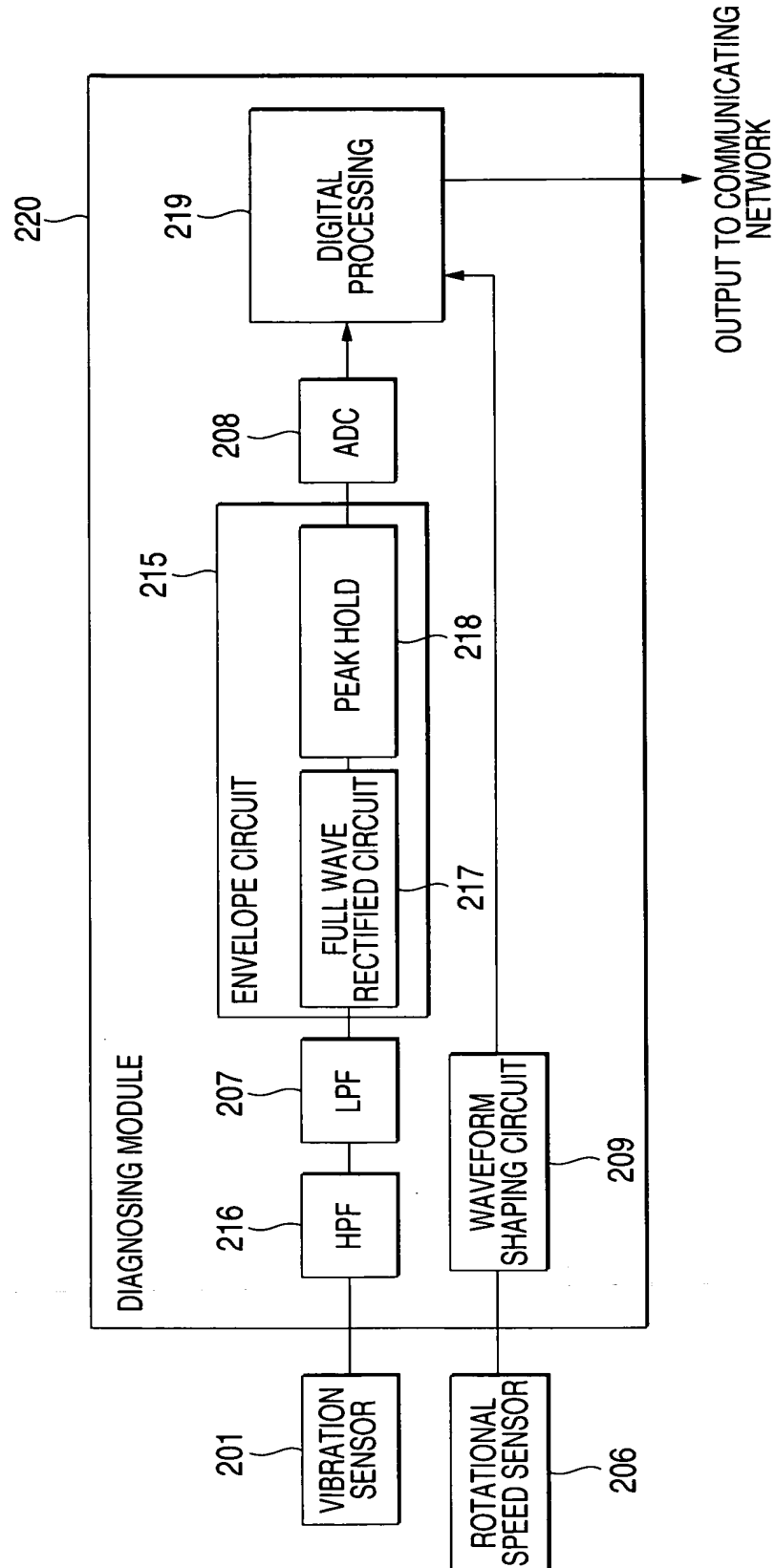




FIG. 25

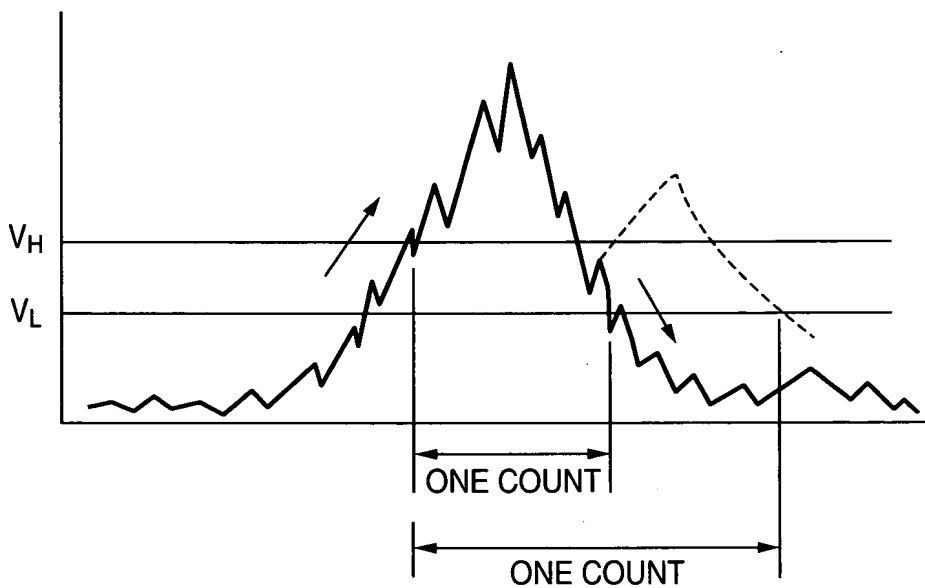


FIG. 26

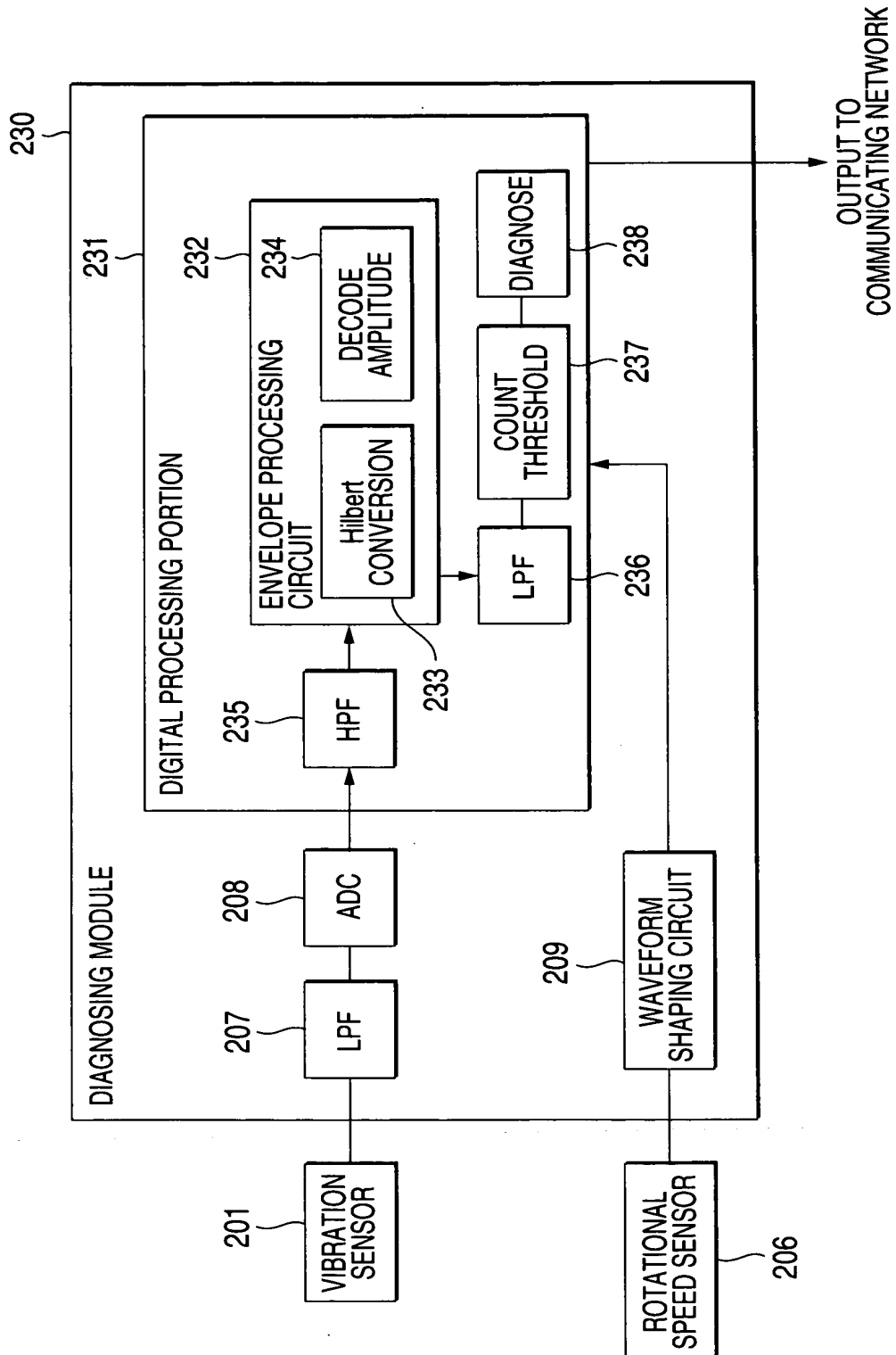




FIG. 27A

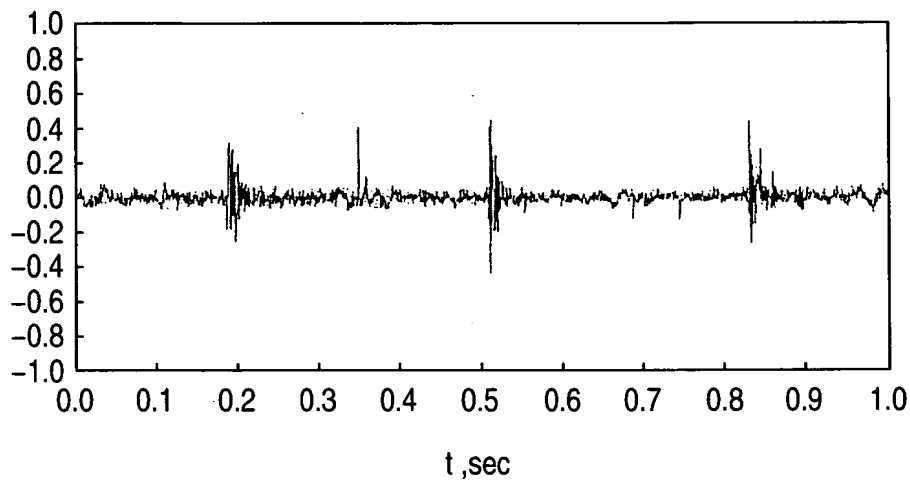
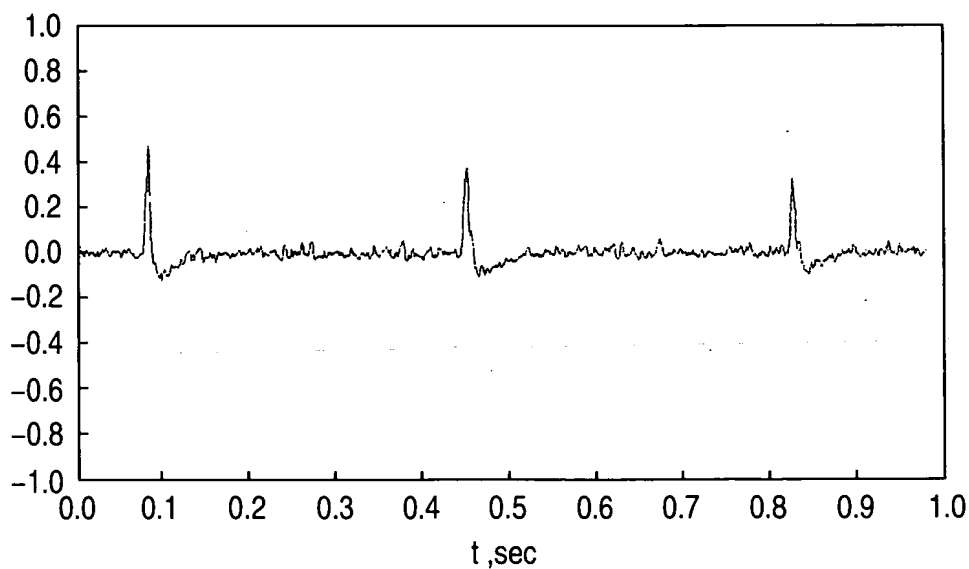


FIG. 27B



SHOCK WAVES ARE GENERATED BY THREE TIMES IN ONE SECOND



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FIG. 28

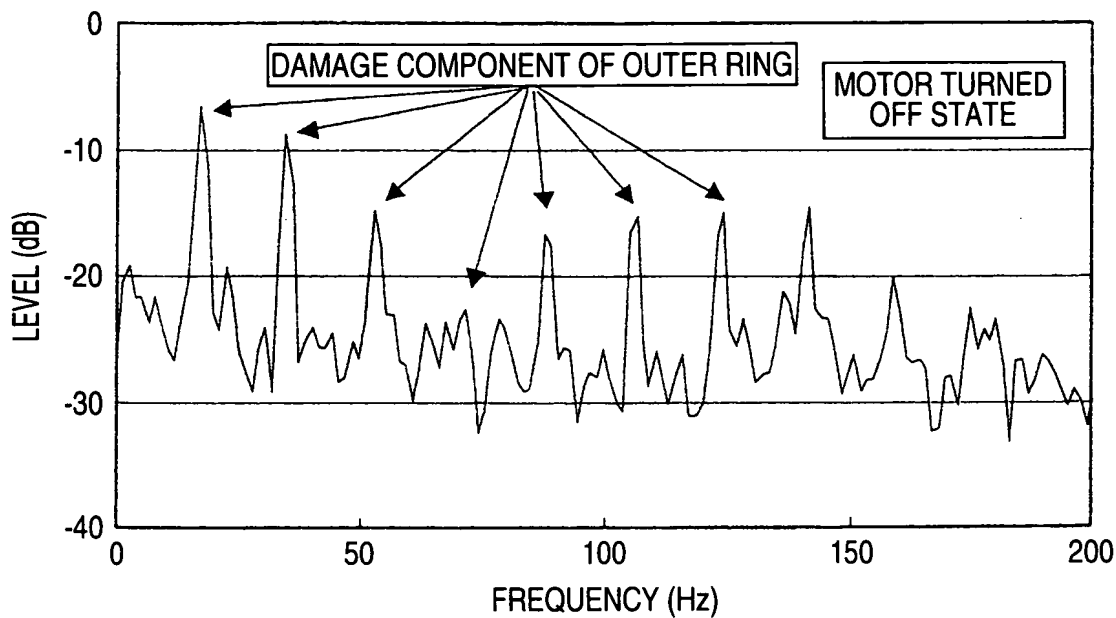


FIG. 29

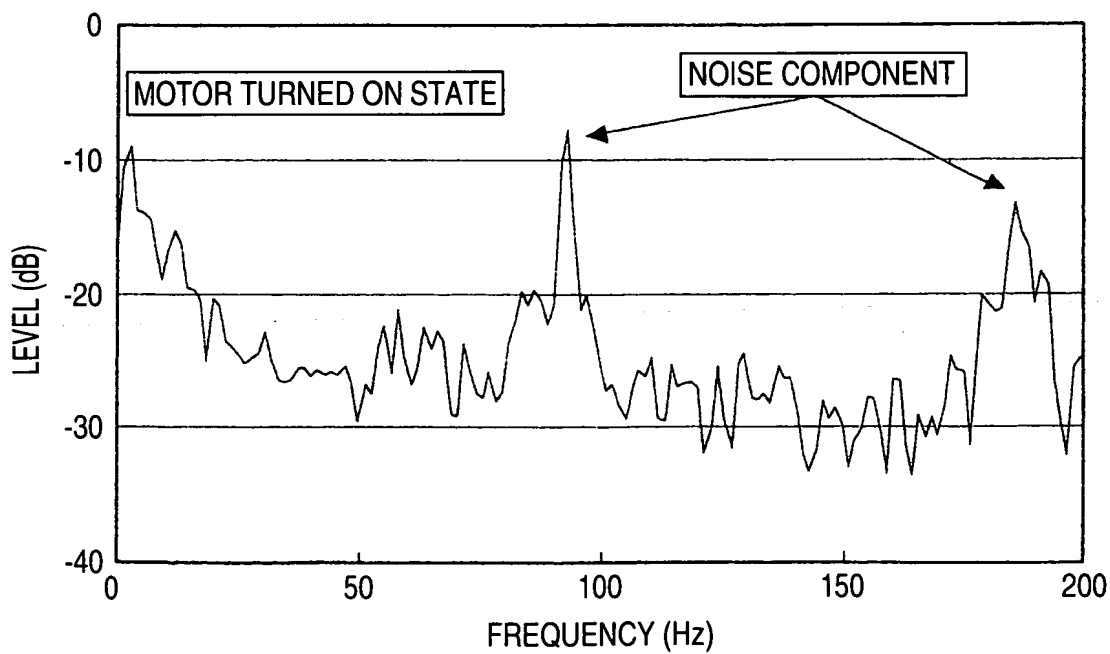


FIG. 30

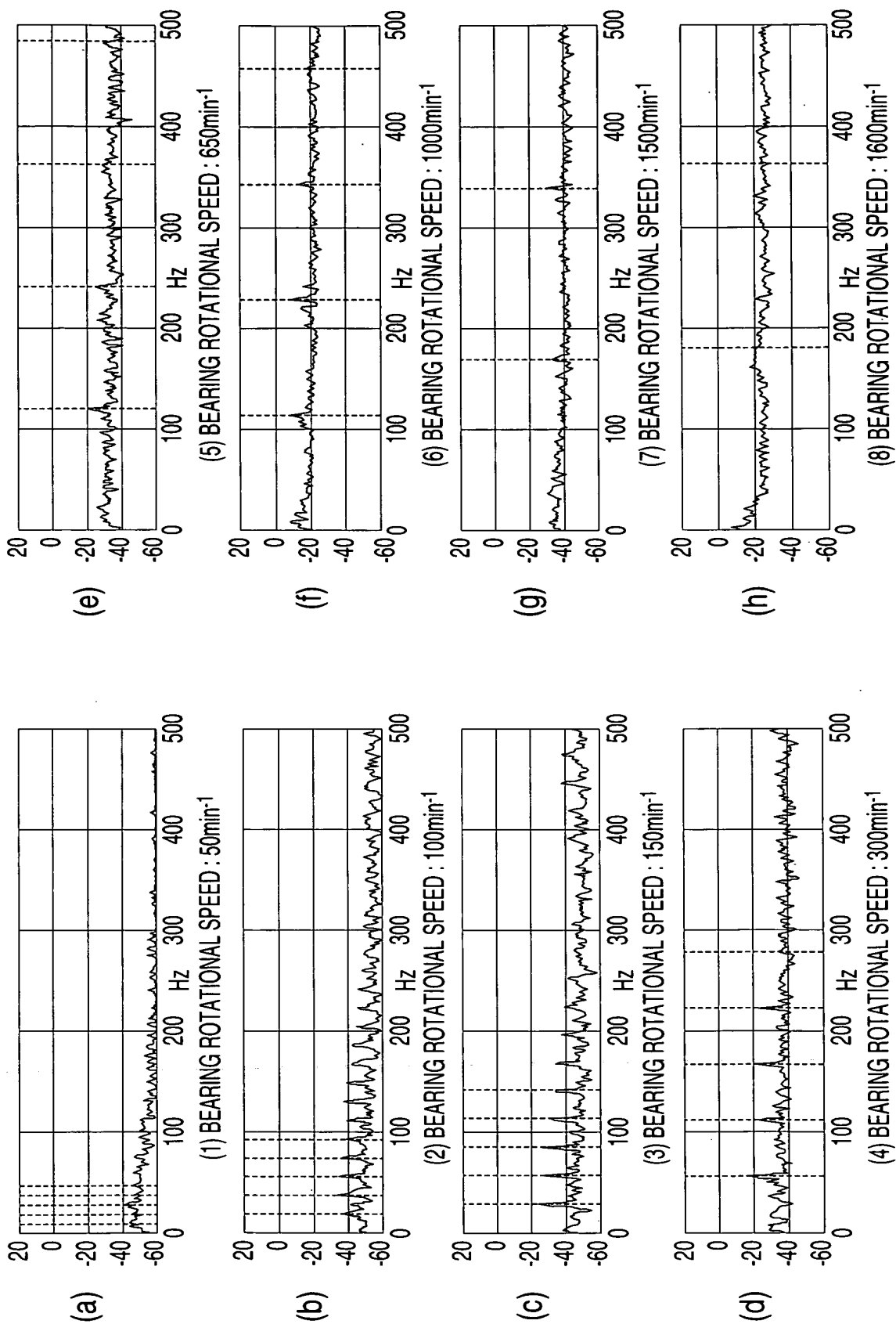




FIG. 31

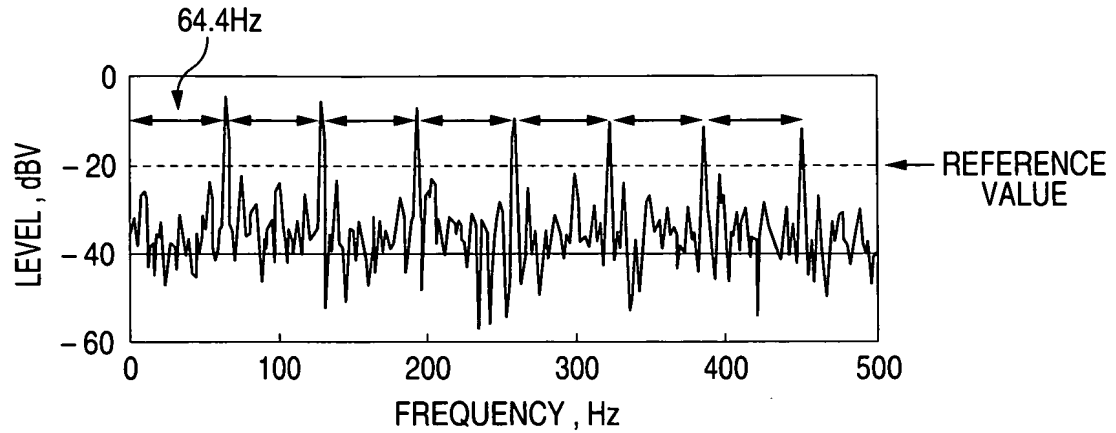


FIG. 32

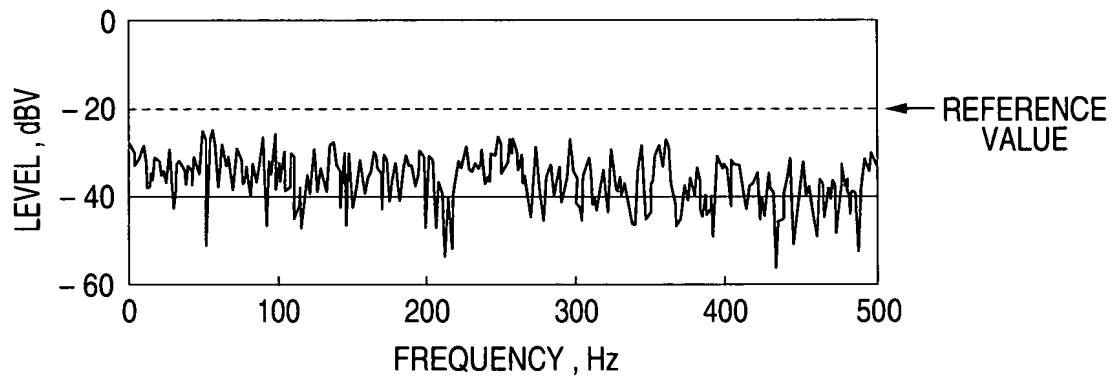


FIG. 33

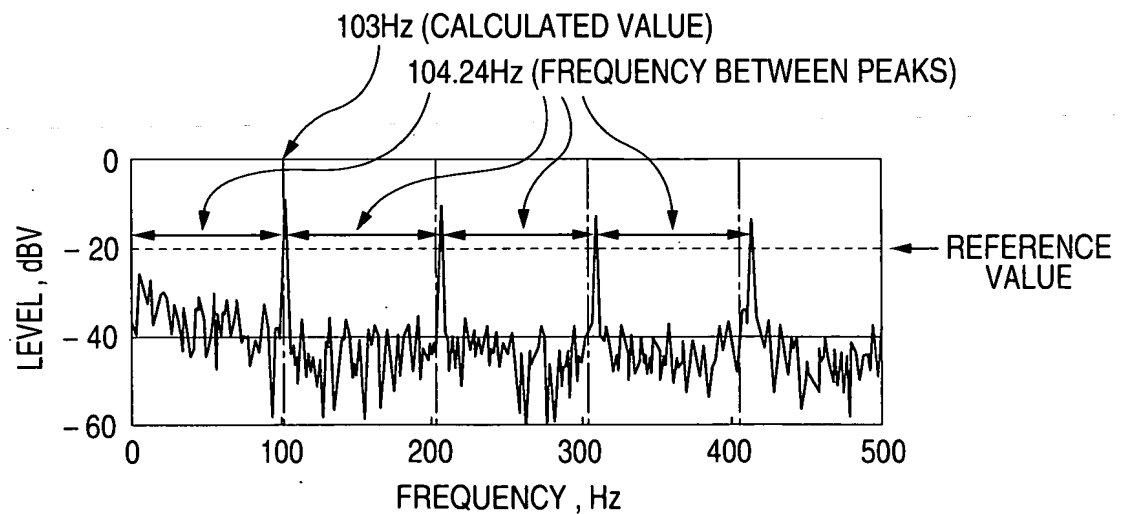




FIG. 34

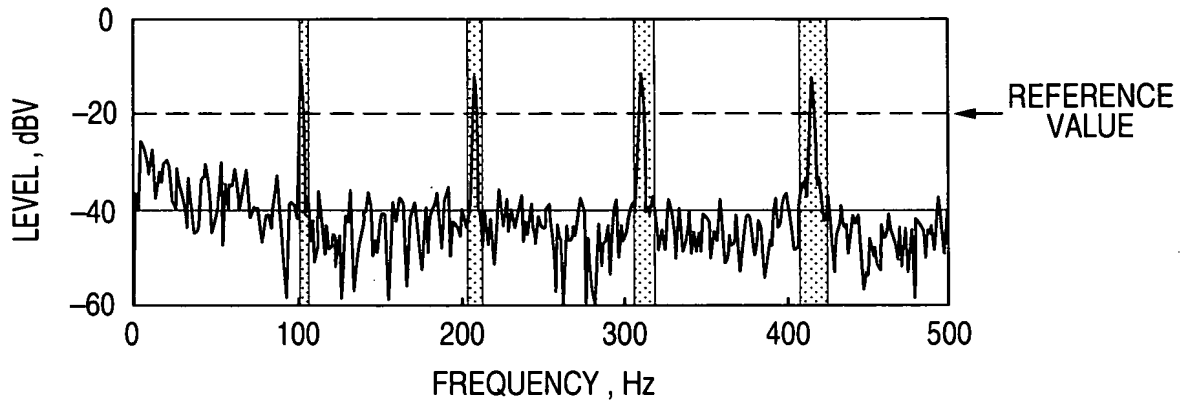


FIG. 35

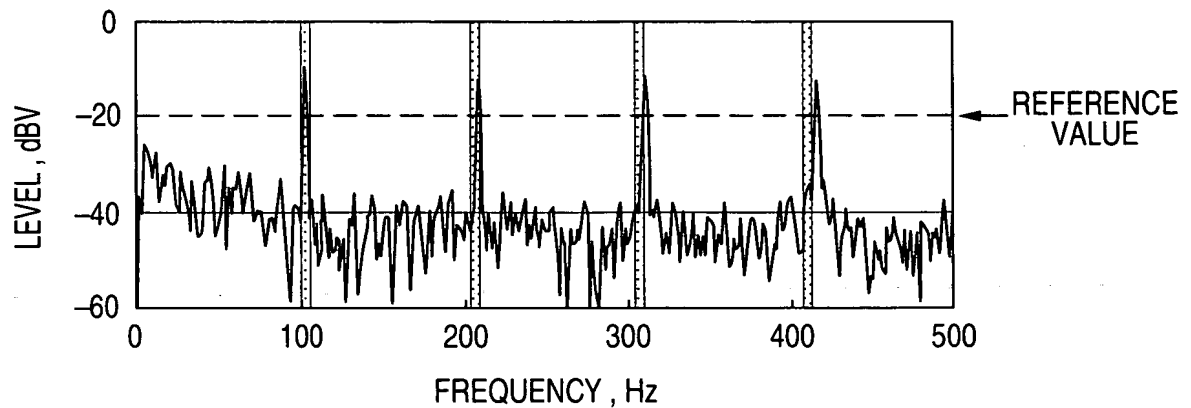




FIG. 36 (a)

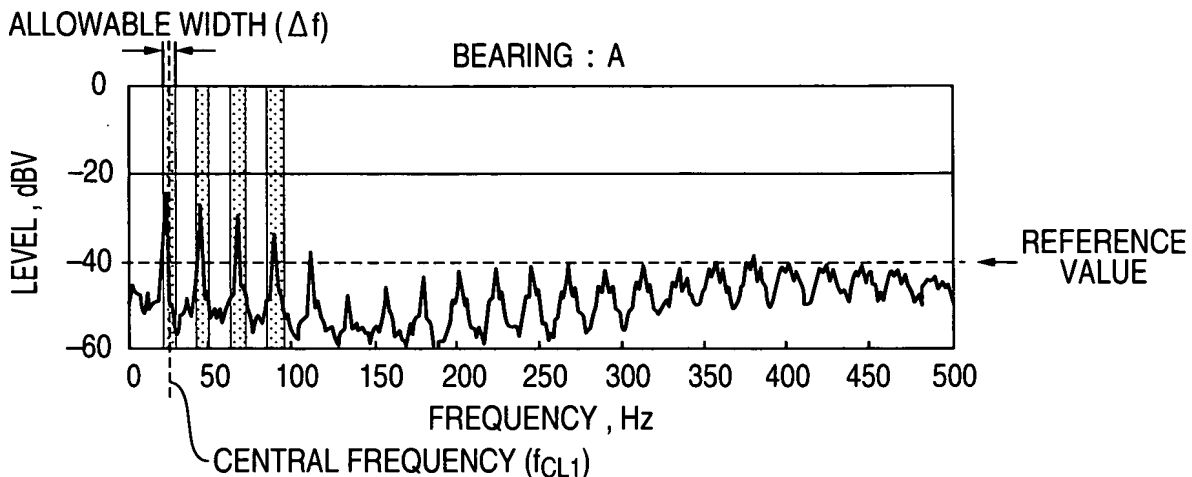


FIG. 36 (b)

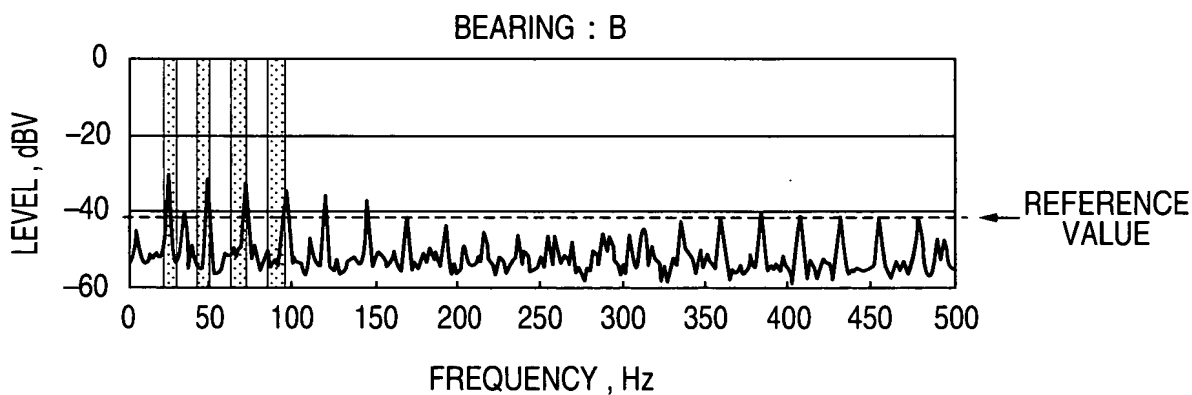
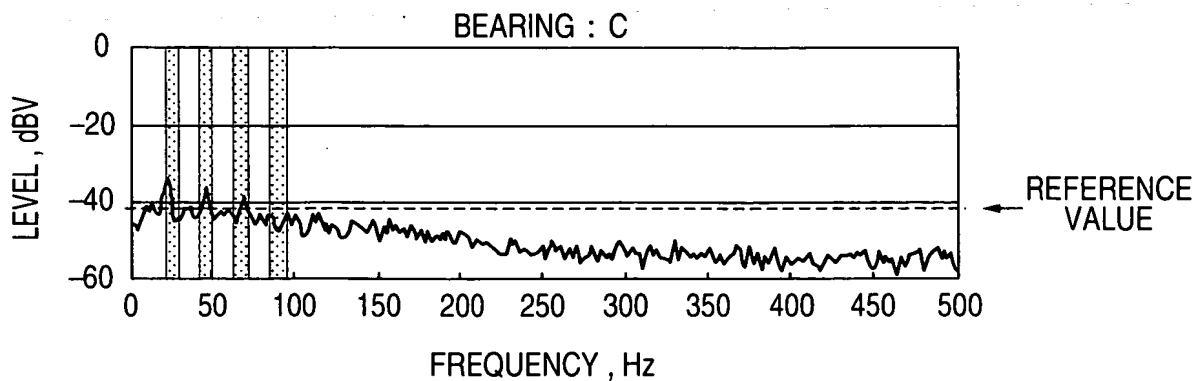


FIG. 36 (c)

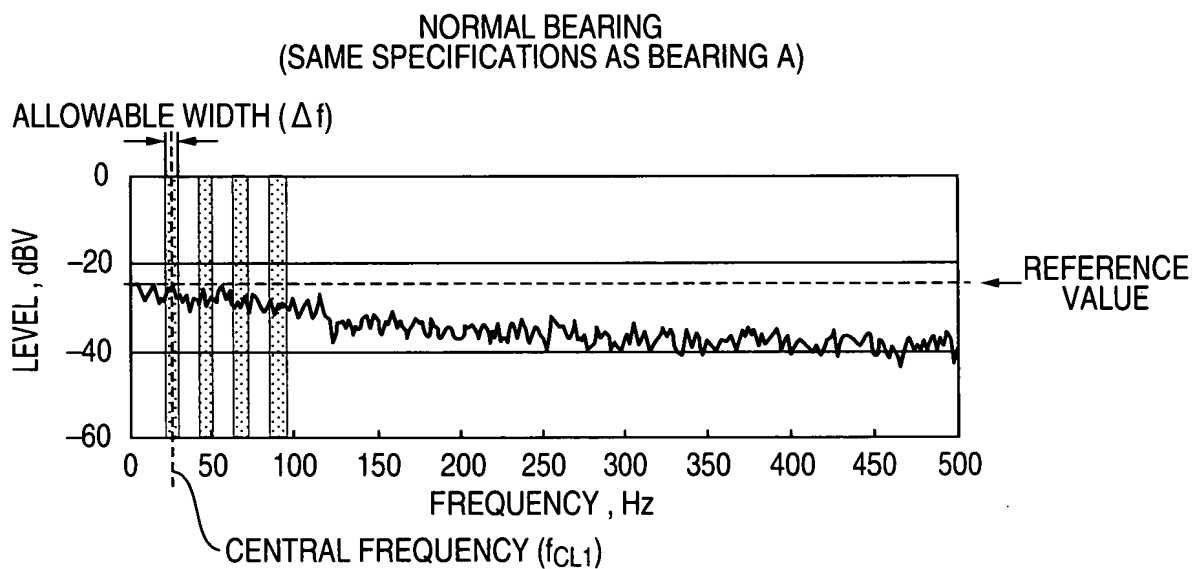




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FIG. 37





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Docket No. Q96096
Takanori Miyasaka et al.
Filed July 21, 2006
Replacement Sheet

FIG. 38 (a)

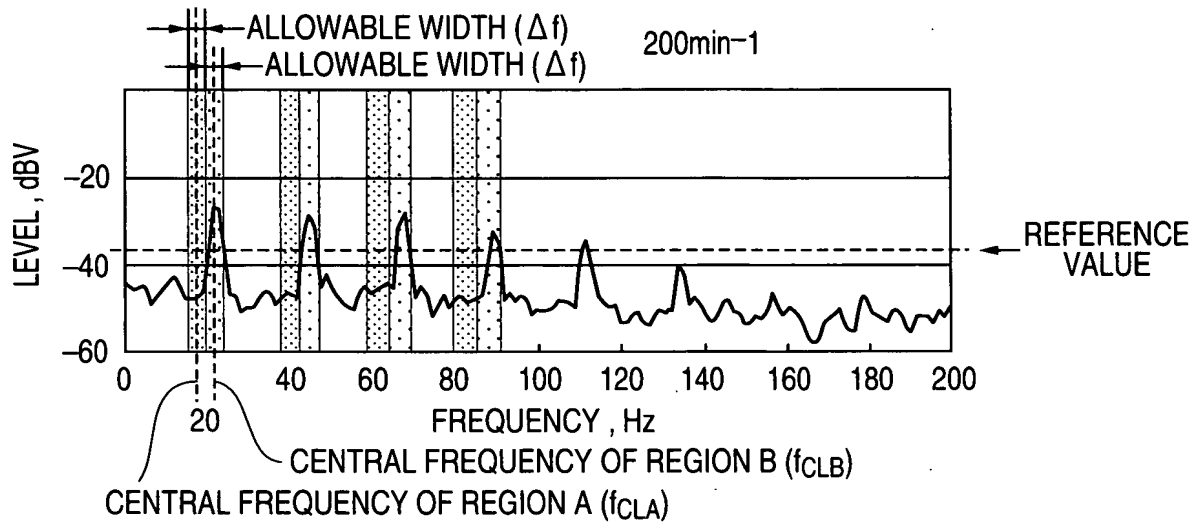


FIG. 38 (b)

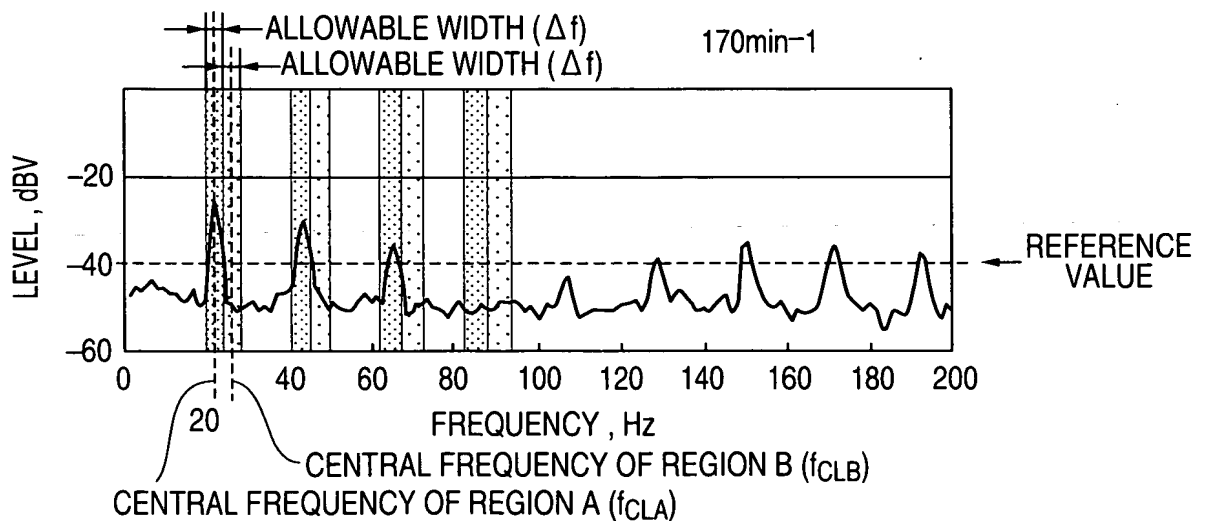




FIG. 39

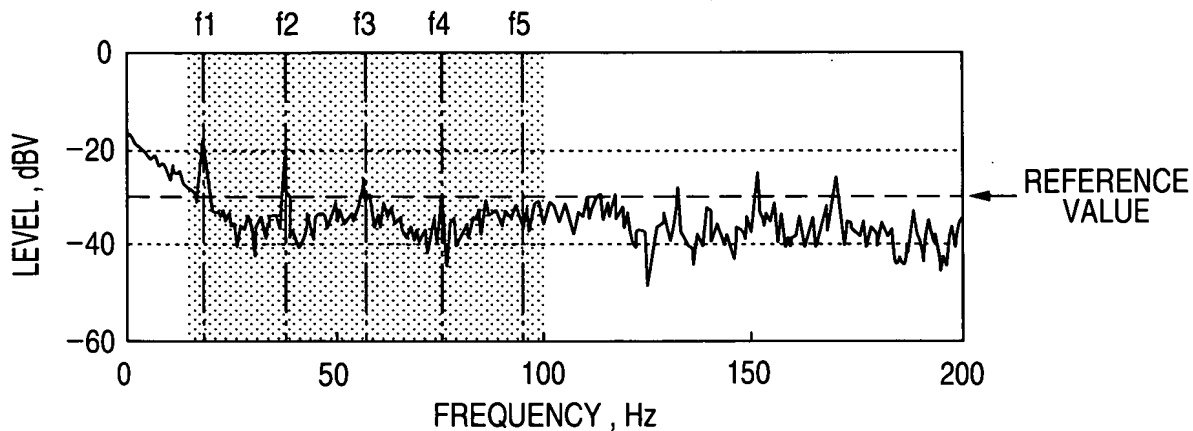


FIG. 40

